

CLAIMS

1. An eye image pick-up system for picking up an image of an eye by using an objective lens and an imaging device, said system comprising:

5 a mirror portion provided between the objective lens and the imaging device, for turning an optical path of an optical system;

a light source provided at a back of the mirror portion on a prolonged line of the optical axis that extends from the objective lens to the mirror portion in
10 the optical path, for emitting a visible light; and

a light guiding means provided to the mirror portion, for guiding the visible light from the light source to an objective lens side;

wherein the light guiding means is constructed by
15 translucent members that are provided concentrically round the optical axis.

2. The eye image pick-up system according to claim 1, wherein the light guiding means has a circular-ring translucent portion formed round the optical axis on a reflecting surface of the mirror portion.

3. The eye image pick-up system according to claim 1, wherein the light guiding means has a plurality of translucent portions formed on a reflecting surface of the

mirror portion and arranged on a circle round the optical
5 axis.

4. The eye image pick-up system according to claim 3,
wherein the plurality of translucent portions of
the light guiding means are formed of a plurality of
triangular translucent portions that are aligned at an
5 equal angle on a circle round the optical axis to direct
respective sharp angles to the optical axis.

5. The eye image pick-up system according to claim 3,
wherein the plurality of translucent portions of
the light guiding means are formed of a plurality of arrow-
shaped translucent portions that are aligned at an equal
5 angle on a circle round the optical axis to direct
respective pointed portions to the optical axis.

6. The eye image pick-up system according to claim 3,
wherein the light guiding means has a plurality of
circular-ring or circular translucent portions that are
formed concentrically round the optical axis on a
5 reflecting surface of the mirror portion, and

wherein the light source has a plurality of light
sources at least adjacent light sources of which emit
lights in different colors to the plurality of translucent
portions.

7. The eye image pick-up system according to claim 1,
wherein the light guiding means has a plurality of
circular-ring or circular translucent portions that are
formed concentrically round the optical axis on a
5 reflecting surface of the mirror portion,

wherein the translucent portions are formed of
colored translucent portions at least adjacent translucent
portions of which pass through lights in different colors,
and

10 wherein the light source has a white light source
that emits a light to the plurality of translucent
portions.

8. The eye image pick-up system according to any one
of claims 1 to 5,

wherein the light guiding means has translucent
portions formed of openings that are formed on a reflecting
5 surface of the mirror portion.

9. The eye image pick-up system according to claim 1,
wherein the mirror portion is molded with resin
material on one surface of which a reflecting surface is
formed, and

5 wherein the light guiding means has a plurality of
translucent portions formed of openings that are aligned on

a circle round the optical axis on a reflecting surface of the mirror portion.

10. The eye image pick-up system according to claim 1, wherein the mirror portion has a holding portion that is provided to communicate with the openings and holds the light source.

11. The eye image pick-up system according to any one of claims 1, 2, 3, 8 and 9,

wherein the light source has a plurality of color light sources that emit a light in different colors
5 respectively, and

said system further comprising:

a focusing deciding means for deciding a focused condition of the image of the eye picked up by the imaging device; and

10 a light emission controlling means for controlling light emitting times of the light sources in respective colors based on a decision result of the focused condition.

12. The eye image pick-up system according to claim 3 or claim 9, further comprising:

a focusing deciding means for deciding a focused condition of the image of the eye picked up by the imaging
5 device; and

a light emission controlling means for changing a number of lights that pass through the plurality of translucent portions of the light guiding means, in response to a decision result of the focused condition.

13. An eye image pick-up system according to claim 3 or claim 9, further comprising:

a focusing deciding means for deciding a focused condition of the image of the eye picked up by the imaging
5 device; and

a light emission controlling means for changing positions of lights that pass through the plurality of translucent portions of the light guiding means, in response to a decision result of the focused condition.

14. The eye image pick-up system according to any one of claims 1, 2, 3, 8 and 9,

wherein the light source the light source has a plurality of color light sources that emit a light in
5 different colors respectively, and

said system further comprising:

an image discriminating means for discriminating to which one of right and left eyes the eye the image of which is picked up by the by the imaging device corresponds; and

10 a light emission controlling means for changing a color of a light emitted from the light source in response

to a decision result of the focused condition.